

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number  
**WO 2005/003381 A1**

(51) International Patent Classification<sup>7</sup>: **C12Q 1/68**

(21) International Application Number: **PCT/AU2004/000900**

(22) International Filing Date: **5 July 2004 (05.07.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
2003903430 4 July 2003 (04.07.2003) AU  
60/491,995 4 August 2003 (04.08.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

**WO 2005/003381 A1**

(54) Title: **METHOD FOR DETECTION OF ALKYLATED CYTOSINE IN DNA**

(57) Abstract: There is described a method for detecting alkylated cytosine in double stranded DNA employing one or more enzymes that differentially modify alkylated cytosine and cytosine. At least one region of the DNA is converted to single stranded DNA and the enzyme is reacted with a target region in the single stranded DNA. The presence or level of alkylated cytosine in the target region is detected by determining the level of enzymatic modification of the target region by the enzyme.